

CT Quiz

Choose the correct answer

- (1) The fundamental measurement made by a CT scanner is the:
- (A) Sorting of CT numbers
 - (B) Determination of gray scale
 - (C) Pixel density
 - (D) Relative x-ray attenuation
 - (E) Voxel atomic number
- (2) Which of the following has a Hounsfield unit value of approximately - 90?
- (A) Fat
 - (B) Gray matter
 - (C) Water
 - (D) Bone
 - (E) Lung
- (3) Tissue characterization is difficult because the value of a CT number may change because of:
- (A) Window level
 - (B) Window width
 - (C) Tube current
 - (D) Scan time
 - (E) Volume averaging
- (4) The measured x-ray transmissions from a single CT fan beam through a patient is called a:
- (A) Filter
 - (B) Back-projection algorithm
 - (C) Tomographic slice
 - (D) Primary beam
 - (E) Projection
- (5) Which image reconstruction algorithm is used in current commercial CT scanners?
- (A) Two-dimensional Fourier transform
 - (B) Three-dimensional Fourier transform
 - (C) Back projection
 - (D) Filtered back projection
 - (E) Algebraic reconstruction algorithm
- (6) If a CT display is set at a window width of 100 and a window center of 50, the:
- (A) HU value of water changes to 50

- (B) White matter will look gray
- (C) Gray matter will look white
- (D) Bone will look black
- (E) Lung will look white

(7) The CT image display contrast:

- (A) Must be selected prior to the x-ray exposures
- (B) May be altered after the CT scan
- (C) Does not modify the appearance of the CT image
- (D) Can be used to change the Hounsfield unit values of image data
- (E) Uses an array processor

(8) The dose to the fetus during an abdominal CT scan would not increase with increasing:

- (A) Patient size
- (B) Tube voltage
- (C) Tube current
- (D) Scan time
- (E) Number of sections

(9) CT anode heat loading increases with all of the following except an increase in:

- (A) Tube voltage
- (B) Tube current
- (C) Scan time
- (D) Section thickness
- (E) Number of sections

(10) CT collimators are:

- (A) Variable for different section thickness
- (B) Not necessary for helical scans
- (C) Usually made out of Plexiglas
- (D) Bowtie shaped
- (E) Cooled using fans